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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,961	01/29/2001	C. Alexander Turner JR.	LEX-0121-USA	9694

24231 7590 12/30/2002

LEXICON GENETICS INCORPORATED
8800 TECHNOLOGY FOREST PLACE
THE WOODLANDS, TX 77381-1160

EXAMINER
HAMUD, FOZIA M

ART UNIT	PAPER NUMBER
1647	

DATE MAILED: 12/30/2002 10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/771,961	Turner et al.
Examiner	**Art Unit**
Fozia Hamud	1647

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Oct 8, 2002*.

2a) ☒ This action is **FINAL.** 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-8* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. Receipt of Applicant's arguments and amendment, filed on 08 October 2002 in Paper No.9, is acknowledged. Claims 1 and 2 have been amended and claims 5-8 have been added. Thus claims 1-8 are pending and under consideration.

2. The following previous rejections and objections are withdrawn in light of Applicants amendments filed in Paper No.9, 10/08/02:

(I) The rejection of claim 1, made under 35 U.S.C.§ 112, second paragraph for re citing "NHP".

(II) The rejection of claims 1 and 2 made under 35 U.S.C *§ 102*(b) as being anticipated by Hillier et al (05/16/1997).

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Applicant's arguments and amendment filed in Paper No.9, 10/08/02, have been fully considered but were deemed persuasive in part. The issues remaining are restated below.

Claim Rejections - 35 U.S.C. § 101/112

5a. Claims 1-4 stand rejected under 35 U.S.C. 101, and new claims 5-8 are rejected under 35 U.S.C. *§* 101, for reasons of record, set forth in the office action mailed on 07/02/02 in Paper No:8, pages 2-5, and reiterated here, because the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility. Applicants submit the following arguments regarding to this rejection.

I. While citing various case laws, Applicants state that the "threshold of utility is not high" and to violate 35 U.S.C.§ 101 the claimed invention "must be totally incapable of achieving a useful result". Applicants argue that the Examiner has failed to establish that the claimed polynucleotides and the encoded polypeptide is totally incapable of achieving a useful result. This argument is not found persuasive. The Examiner has established that the claimed polynucleotide (which Applicants describe as encoding a novel human proteins), is not supported by either a specific and substantial asserted utility or a well established utility, because the specification does not establish a nexus between the claimed invention and a physiological process, neither does it disclose any specific information of the protein encoded by the claimed nucleic acid. Although, all DNAs can be used as hybridization probes, and all polypeptides can be used to make antibodies, however, these utilities are neither specific nor substantial.

II. Applicants assert that this case is similar to *in re Brana*, in which the Federal Circuit admonished the P.T.O. for confusing "the requirement under the law for obtaining a patent with the requirement for obtaining government approval to market a particular drug for human consumption". Applicants are correct in that the requirement of obtaining a patent is not the same as that of obtaining an FDA approval, however, instant case is not similar to *in re Brana*, because, in *In re Brana*, 34 USPQ 1436, 1441 (Fed. Cir. 1995), compounds with specific structure and specific activity were claimed. Thus, in that case evidence of success in structurally similar compounds was relevant in determining whether one skilled in the art would believe an asserted utility; therefore, an implicit assertion of a tumor target was sufficiently specific to satisfy the threshold utility

requirement. Furthermore, *in re Brana*, provided test results showing that several compounds within the scope of the claims exhibited significant antitumor activity against standard tumor model in vivo. However, instant Applicants do not provide an activity for the protein encoded by the claimed polynucleotide, nor do they provide the physiological significance of this protein, only, an assertion is made that the protein of the instant application is similar to CD82 family of proteins.

III. Applicants argue that the action recognizes that the proteins of the instant invention are membrane proteins similar to CD82, a family of proteins with a common, well established specific and substantial utility. Applicants submit sequence comparison of SEQ ID NO:2 of the instant Application to those of IPI00083978.2, asserting that the claimed sequences are similar to those of CD82 antigen, also known as inducible membrane protein R2, C33 antigen, IA4, metastasis Suppressor Kangi and Suppressor Tumorigenicity-6. Thus Applicants conclude that given the convincing evidence that the protein of the instant invention is a membrane protein similar to CD82, it clearly has credible utility. This argument is not deemed persuasive. Contrary to Applicants argument, the office action mailed office action mailed on 07/02/02 in Paper No:8, *only* recognized that the specification described the novel human proteins encoded by the claimed nucleic acid as having structural similarity with membrane receptors such as, but not limited to mammalian CD82 and CD37. However, upon examining the sequences submitted by the Applicants, it appears that the polypeptide of SEQ ID NO:2 of the instant application is not related to the CD82, because the submitted sequences have no homology to instant SEQ ID NO:2. Sequences search for the polynucleotide of SEQ ID NO:1 and the polypeptide of SEQ ID NO:2, reveal that instant SEQ ID

NO:1 and SEQ ID NO:2 share 100% homology to a BCL-like polynucleotide and polypeptide, respectively, (see attached copy of the comparison of SEQ ID NO:1 claimed in the instant invention and the sequences of the references (SEQUENCE COMPARISON 'B' and "C"). Thus, instant specification as originally filed, failed to disclose that protein of the instant invention is a member of the CD82 family. Even if the protein of the instant invention is a member of the CD82 family, Applicants have not demonstrated that there is a common biological activity for all the members of this family.

IV. Finally, Applicants argue that, as just one of example of utility for the present nucleotide sequences is that they can be used to track the expression of the genes encoding the described proteins, as a gene chip format to provide high throughput analysis of the level of gene expression. Applicants contend that such "DNA chips" clearly have utility as evidenced by hundreds of issued patents. Applicants also argue that the present nucleotide sequences are human membrane proteins similar to CD82 antigen and provide unique identifier of the corresponding gene. This argument is also, not deemed persuasive. No meaningful information will be obtained from tracking the level of expression of the claimed nucleotide, because there is no physiological or biological significance attached to these nucleotides or the encoded proteins. The first requirement is that one must know the biological significance of the polynucleotide(s) which is(are) being evaluated. Without this information, the results of the transcript image are useless because one would not know if the polynucleotide expression should be increased or decreased or even what significance could be attributed to such changes in expression profiles. Applicants' assertion that "DNA chips" have utility

is correct, however, instant application is not claiming "gene chips", (devices not much larger than postage stamps, that are based on a glass substrate wafer and contain many tiny cells - 400,000 is common, each holding DNA from a different human gene). The Patents listed by Applicants all describe a pioneering and efficient means of large scale production of miniaturized oligonucleotide arrays for sequencing, diagnostic and forensics analysis. Thus, the fact that the claimed nucleotide can be used in a DNA chip, does not provide the claimed sequences with specific and substantial utility, because without knowing the significance of the instant polynucleotide or the activity of the encoded protein, using the claimed polynucleotide in a gene chip would not yield any useful information.

Therefore, the isolated nucleic acid comprising the nucleotide sequence set forth in SEQ ID NO:1, encodes a polypeptide of as yet undetermined function or biological significance, thus, unless Applicants demonstrate the physiological significance or the biological role of the instant polynucleotide and the protein it encodes, the claimed invention is not supported by either a specific and substantially asserted utility or a well established utility.

The claimed invention stands rejected under 35 U.S.C. 112, first paragraph, since the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Claim Rejections - 35 U.S.C. §112

6a. The rejection of claim 2 made under 35 U.S.C. 112, second paragraph, for reciting "..... hybridizes under stringent conditions....", is maintained for the for reasons of record, set forth in the office action mailed on 07/02/02 in Paper No:8, page 6. Applicants amend claim 2 by reciting "highly stringent". Applicants assert that support for the hybridization conditions is provided in the specification on page 3, lines 30-33, however, the instant specification only gives exemplary hybridization conditions. To obviate this rejection, Applicant must recite the specific highly stringent conditions.

New rejections necessitated by Applicant's amendments:

Claim Rejections - 35 U.S.C. § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7a. Claims 6 and 8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to a non-statutory subject matter. Claims 6 and 8 recite "a cell .....", which encompasses the cell, as it occurs in nature, for example, as a gene therapy patient. However, since Applicants do not intend to claim a naturally occurring products amendment of the claims to show the hand of man would obviate this rejection. It is suggested that claims 6 and 8 be amended to recite " an isolated cell..... .....". Appropriate correction is required.

Conclusion

8. No claim is allowed.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Advisory Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fozia Hamud whose telephone number is (703) 308-8891. The examiner can normally be reached on Monday-Thursday from 8:00AM to 4:30PM (Eastern time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Kunz, can be reached on (703) 308-4623.

Official papers filed by fax should be directed to (703) 308-4227. Faxed draft or informal communications with the examiner should be directed to (703) 308-0294.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Fozia Hamud
Patent Examiner
Art Unit 1647
26 December 2002

YVONNE EYLER, PH
SUPERVISORY PATENT E
TECHNOLOGY CENTE

GenCore version 4.5

OM nucleic - nucleic search, using sw model

Run on: June 20, 2002, 03:25:56 ; Search time 302.61 Seconds
(without alignments)
5582.908 Million cell updates/sec

Title: US-09-771-961-1
Perfect score: 984
Sequence: 1 atgtgtagcaccagtgggtg.....cacatgaagaagtagactga 984

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 1736436 seqs, 858457221 residues

Total number of hits satisfying chosen parameters: 3472872

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	984	100.0	984	22	AAD13235	Human BCL-X-like p
2	982.4	99.8	1179	22	AAH22582	Human Bcl-Gl polyp
3	821	83.4	2132	22	AAD13237	Human BCL-X-like p
4	791.6	80.4	1917	23	AAS90453	DNA encoding novel
5	678	68.9	759	22	AAD13236	Human BCL-X-like p
6	676.4	68.7	954	22	AAH22583	Human Bcl-Gs polyp
7	505.2	51.3	987	22	AAH22670	Mouse Bcl-G polype
8	429	43.6	632	22	AAL01348	Human reproductive
9	388	39.4	388	22	ABA47100	Human breast cell
10	388	39.4	388	22	ABA64982	Human foetal liver
11	388	39.4	388	22	ABA32090	Probe #10556 for g
12	388	39.4	388	22	AAK13408	Human brain expres
13	388	39.4	388	22	AAK39145	Human bone marrow
14	388	39.4	388	22	AAI19954	Probe #9887 for ge
15	388	39.4	388	22	AAI45152	Probe #13838 used
16	388	39.4	388	22	AAI05666	Probe #5657 used t
17	317	32.2	466	22	ABA52358	Human foetal liver
18	317	32.2	466	22	ABA22153	Probe #619 for gen
19	317	32.2	466	22	AAK00629	Human brain expres
20	317	32.2	466	22	AAK26079	Human bone marrow
21	317	32.2	466	22	AAI10708	Probe #641 for gen
22	317	32.2	466	22	AAI31966	Probe #652 used to
23	317	32.2	466	22	AAI00638	Probe #629 used to
24	272.4	27.7	8922	22	AAK87069	Human immune/haema
25	39.8	4.0	43	22	AAH22593	Bcl-Gs mutagenic p
c 26	39.8	4.0	43	22	AAH22594	Bcl-Gs mutagenic p
27	37.6	3.8	7055	20	AAX26303	Sequence of phage
28	37.6	3.8	7783	20	AAX26302	Sequence of phage
c 29	36.4	3.7	630	22	AAF31484	Porcine reproducti
c 30	36.2	3.7	759	22	AAD13236	Human BCL-X-like
c 31	36.2	3.7	954	22	AAH22583	Human Bcl-Gs p
c 32	36.2	3.7	984	22	AAD13235	Human BCL-X-lik
c 33	36.2	3.7	1179	22	AAH22582	Human Bcl-Gl polyp
c 34	36.2	3.7	2132	22	AAD13237	Human BCL-X-like p
c 35	35.8	3.6	10377	24	ABL34220	Human immune syste
36	35.6	3.6	484	20	AAV87011	EST clone AY93. H
37	35.2	3.6	6971	20	AAX26304	Sequence of phage
c 38	34.8	3.5	600	22	ABA60917	Human foetal liver
c 39	34.8	3.5	600	22	ABA28894	Probe #7360 for ge
c 40	34.8	3.5	600	22	AAK09207	Human brain expres
c 41	34.8	3.5	600	22	AAK35096	Human bone marrow
c 42	34.8	3.5	600	22	AAI40812	Probe #9498 used t
43	34.8	3.5	4528	17	AAT30055	S. pneumoniae dete
c 44	34.8	3.5	10711	19	AAV52278	Streptococcus pneu
45	34.6	3.5	1577	23	ABL27509	Drosophila melanog

ALIGNMENTS

Sequence Comparison "B"

RESULT 1
AAD13235
ID AAD13235 standard; cDNA; 984 BP.
XX
AC AAD13235;
XX
DT 23-OCT-2001 (first entry)
XX
DE Human BCL-X-like protein encoding cDNA #1.
XX
KW Human; BCL-X-like protein; therapy; physiological disorder; ss.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT CDS 1..984
FT /*tag= a
FT /product= "Human BCL-X-like protein #1"
XX
PN WO200157213-A2.
XX
PD 09-AUG-2001.
XX
PF 31-JAN-2001; 2001WO-US03446.
XX
PR 04-FEB-2000; 2000US-0180412.
XX
PA (LEXI-) LEXICON GENETICS INC.
XX
PI Donoho G, Hilbun E, Turner CA, Friedrich G, Abuin A, Zambrowicz B;
PI Sands AT;
XX

See OVR

Sequence Comparison B'

DR WPI; 2001-488882/53.
DR P-PSDB; AAE07040.
XX
PT Novel isolated human BCL-X-like polynucleotide, useful in therapeutic,
PT diagnostic and pharmacogenic applications -
XX
PS Claim 2a; Page 30; 33pp; English.
XX
CC The present sequence is a cDNA encoding human BCL-X-like protein.
CC The BCL-X-like polynucleotides are useful in therapeutic, diagnostic
CC and pharmacogenic applications. They are useful for screening drugs
CC effective in the treatment of symptomatic or phenotypic manifestations
CC perturbing the normal function of protein in the body and also for
CC treating physiological disorders and diseases. The BCL-X-like
CC polynucleotides are useful in conjunction with polymerase chain
CC reaction to screen libraries, isolate clones, to prepare cloning
CC and sequencing templates and as hybridisation probes for assessing
CC gene expression patterns.
XX
SQ Sequence 984 BP; 289 A; 230 C; 250 G; 215 T; 0 other;

Query Match 100.0%; Score 984; DB 22; Length 984;
Best Local Similarity 100.0%; Pred. No. 6.6e-299;
Matches 984; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
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          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy     61 accatagaattcaaaatcctcgcctactacaccagacatcatgtcttcaagagcacccct 120
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Qy    121 gctctcttctcaccaaagctgctgagaacaagaagtttgtcccagaggggcctggggaat 180
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Qy    301 gagaaggaagattcgcagagcacgcctgccaaggtctctgctcagggtcaaaggacgttg 360
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Qy    361 gaataccaagattcgcacagccagcagtggtccaggtgtctttctaacgtggagcagtgc 420
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Qy    421 ttggagcatgaagctgtggaccccaaagtcatttccattgccaaccgagtagctgaaatt 480
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Qy    481 gtttattcctggccaccaccacaagcgacccaggcaggaggcttcaagtccaaagagatt 540
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Qy    541 tttgtaactgagggtctctccttccagctccaaggccacgtgcctgtagcttcaagttct 600
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Qy    601 aagaaagatgaagaagaacaaatactagccaaaattgttgagctgctgaaatattcagga 660
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    601 aagaaagatgaagaagaacaaatactagccaaaattgttgagctgctgaaatattcagga 660

Qy    661 gatcagttggaaagaaagctgaagaaagataaggctttgatgggccacttccaggatggg 720
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy    721 ctgtcctactctgttttcaagaccatcacagaccaggtcctaatgggtgtggaccccagg 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy    781 ggagaatcagaggtcaaagctcagggctttaaggctgcccttgtaatagacgtcacggcc 840
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    781 ggagaatcagaggtcaaagctcagggctttaaggctgcccttgtaatagacgtcacggcc 840

Qy    841 aagctcacagctattgacaaccacccgatgaacagggtcctgggctttggcaccaagtac 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    841 aagctcacagctattgacaaccacccgatgaacagggtcctgggctttggcaccaagtac 900

Qy    901 ctgaaagagaacttctcgccatggatccagcagcacggtggatgggaaaaaatacttggg 960
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    901 ctgaaagagaacttctcgccatggatccagcagcacggtggatgggaaaaaatacttggg 960

Qy    961 atatcacatgaagaagtagactga 984
          |||||||||||||||||||||||||
Db    961 atatcacatgaagaagtagactga 984
```

RESULT 2
AAH22582
ID AAH22582 standard; cDNA; 1179 BP.
XX
AC AAH22582;
XX
DT 07-SEP-2001 (first entry)
XX
DE Human Bcl-Gl polypeptide encoding cDNA.
XX
KW Bcl-G; cancer; cancer therapy; oncogene; apoptosis; Bcl-Gl; cytostatic;
KW antiapoptotic; chromosome 12p12.3; human; ss.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT CDS 196..1179
FT /*tag= a
FT /product= "Bcl-Gl"
XX
PN WO200144282-A2.
XX
PD 21-JUN-2001.
XX
PF 13-DEC-2000; 2000WO-US33793.
XX
PR 14-DEC-1999; 99US-0461641.
XX
PA (BURN-) BURNHAM INST.
XX
PI Reed JC, Godzik A;
XX
DR WPI; 2001-398125/42.
DR P-PSDB; AAB85166.
XX
PT Novel polynucleotide encoding Bcl-G polypeptide, useful for modulating
PT apoptosis, and for diagnosing and treating cancer -
XX
PS Claim 3; Fig 1; 117pp; English.
XX
CC The invention relates to Bcl-G polypeptides and nucleic acids encoding
CC them. The Bcl-G polypeptides can be expressed by standard recombinant
CC methodology. Bcl-G oligonucleotides (or its anti-sense strand) and Bcl-G
CC specific antibodies are useful for diagnosing cancer, monitoring cancer
CC therapy or assessing prognosis of patients with cancer. The Bcl-G
CC polypeptides are useful for modulating the activity of an oncogenic
CC polypeptide. They are useful for identifying modulators, for modulating
CC a level of apoptosis mediated by the Bcl-G polypeptide. A therapeutic
CC composition comprising the Bcl-G polypeptide, polynucleotide or antibody
CC is useful for treating a pathology characterized by abnormal cell
CC proliferation especially cancer. The present sequence represents a cDNA

GenCore version 4.5

OM protein - protein search, using sw model

Run on: June 19, 2002, 16:32:27 ; Search time 53.19 Seconds
(without alignments)
682.856 Million cell updates/sec

Title: US-09-771-961-2
Perfect score: 1709
Sequence: 1 MCSTSGCDLEEIPLDDDDLN.....WIQQHGGWEKILGISHEEVD 327

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 747574 seqs, 111073796 residues

Total number of hits satisfying chosen parameters: 747574

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_032802:*
1: /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1980.DAT:*
2: /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1981.DAT:*
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20: /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1999.DAT:*
21: /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA2000.DAT:*
22: /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	1709	100.0	327	22	AAE07040	Human BCL-X-like p
2	1709	100.0	327	22	AAB85166	Human Bcl-Gl polyp
3	1189.5	69.6	252	22	AAE07041	Human BCL-X-like p
4	1189.5	69.6	252	22	AAB85167	Human Bcl-Gs polyp
5	929.5	54.4	328	22	AAB85188	Mouse Bcl-G polype
6	691.5	40.5	151	22	AAM95378	Human reproductive
7	686	40.1	129	22	ABB27961	Human peptide #612
8	686	40.1	129	22	ABB33133	Peptide #639 encod
9	686	40.1	129	22	ABB18598	Protein #597 encod
10	686	40.1	129	22	AAM53929	Human brain expres
11	686	40.1	129	22	AAM66317	Human bone marrow
12	686	40.1	129	22	AAM14186	Peptide #620 encod
13	686	40.1	129	22	AAM26596	Peptide #633 encod
14	686	40.1	129	22	AAM01922	Peptide #604 encod
15	608	35.6	178	22	ABG26266	Novel human diagno
16	122.5	7.2	485	22	AAU00222	LFn-Bcl-XL apoptos
17	121	7.1	225	18	AAW19396	"Deprenyl" (RTM)-i
18	120	7.0	411	22	AAU00219	Bcl-Xl-DTR apoptos
19	119.5	7.0	190	16	AAR68884	Chicken lymphoid B
20	118.5	6.9	249	19	AAW38358	Apoptosis associat
21	118	6.9	233	22	AAB73303	Rat wild-type Bcl-
22	117	6.8	233	16	AAR68887	Human thymus BCL-X
23	117	6.8	233	17	AAW05821	Bcl-XL protein. H
24	117	6.8	233	18	AAW31530	Human anti-apoptot
25	117	6.8	233	21	AAY83223	Bcl-x polypeptide.
26	117	6.8	233	21	AAY69969	Human Bcl-XL prote
27	117	6.8	233	22	AAG64262	Human Bcl-XL prote
28	117	6.8	233	22	AAB50538	Human Bcl-xL prote
29	117	6.8	233	22	AAB47515	Protein encoded by
30	117	6.8	235	19	AAW48312	Mouse BCL-x gamma.
31	115	6.7	212	22	AAG64285	Mutant bcl-XL prot
32	115	6.7	485	22	AAM39971	Human polypeptid
33	114	6.7	233	22	AAB73304	Mutant rat Bcl-
34	112.5	6.6	185	22	ABB42045	Peptide #9551 e
35	112.5	6.6	185	22	ABB25656	Protein #7655 enco
36	112.5	6.6	185	22	AAM62926	Human brain expres
37	112.5	6.6	185	22	AAM75738	Human bone marrow
38	112.5	6.6	185	22	AAM35847	Peptide #9884 enco
39	111	6.5	212	22	AAB20495	Human Bcl-xL (tran
40	111	6.5	432	21	AAG13768	Arabidopsis thalia
41	111	6.5	434	21	AAG13767	Arabidopsis thalia
42	111	6.5	452	21	AAG13766	Arabidopsis thalia
43	105.5	6.2	901	22	AAU35555	Haemophilus influe
44	100	5.9	1369	20	AAY24788	Human secreted pro
45	100	5.9	1369	22	AAU39009	Human secreted pro

ALIGNMENTS

RESULT 1
AAE07040
ID AAE07040 standard; Protein; 327 AA.
XX
AC AAE07040;
XX
DT 23-OCT-2001 (first entry)
XX
DE Human BCL-X-like protein #1.
XX
KW Human; BCL-X-like protein; therapy; physiological disorder.
XX
OS Homo sapiens.
XX
PN WO200157213-A2.
XX
PD 09-AUG-2001
XX
PF 31-JAN-2001; 2001WO-US03446.
XX
PR 04-FEB-2000; 2000US-0180412.
XX
PA (LEXI-) LEXICON GENETICS INC.
XX
PI Donoho G, Hilbun E, Turner CA, Friedrich G, Abuin A, Zambrowicz B;
PI Sands AT;
XX
DR WPI; 2001-488882/53.
DR N-PSDB; AAD13235.
XX
PT Novel isolated human BCL-X-like polynucleotide, useful in therapeutic,
PT diagnostic and pharmacogenic applications -
XX
PS Claim 4; Page 30-31; 33pp; English.

See OVR

Sequence Comparison C

XX
CC The present sequence is human BCL-X-like protein.
CC The BCL-X-like polynucleotides are useful in therapeutic, diagnostic
CC and pharmacogenic applications. They are useful for screening drugs
CC effective in the treatment of symptomatic or phenotypic manifestations
CC perturbing the normal function of protein in the body and also for
CC treating physiological disorders and diseases. The BCL-X-like
CC polynucleotides are useful in conjunction with polymerase chain
CC reaction to screen libraries, isolate clones, to prepare cloning
CC and sequencing templates and as hybridisation probes for assessing
CC gene expression patterns.
XX
SQ Sequence 327 AA;

Query Match 100.0%; Score 1709; DB 22; Length 327;
Best Local Similarity 100.0%; Pred. No. 8.1e-166;
Matches 327; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy       1 MCSTSGCDLEEIPLDDDDLNTIEFKILAYYTRHHVFKSTPALFSPKLLRTRSLSQRGLGN 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 mcstsgcdleeipldddd1ntiefkilayytrhhvfkstpalfspkllrtrslsqrglgn 60

Qy      61 CSANESWTEVSWPCRNSQSSEKAINLGKKKSSWKAFFGVVEKEDSQSTPAKVSAQGQRTL 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 csaneswtevswpcrnsqssekainlgkkksswkaffgvvekedsqstpakvsaqgqrtl 120

Qy     121 EYQDSHSQQWSRCLSNVEQCLEHEAVDPKVISIANRVAEIVYSWPPPQATQAGGFKSKEI 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 eyqdshsqqwsrclsnveqcleheavdpkvisianrvaeivyswpppqatqaggfkskei 180

Qy     181 FVTEGLSFQLQGHVPVASSSKKDEEEQILAKIVELLKYSGDQLERKLKKDKALMGHFQDG 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 fvteglsfqlqghvpvassskkdeeeqilakivellkysgdqlerklkkdkalmghfqdg 240

Qy     241 LSYSVFKTITDQVLMGVDPRGESEVKAQGFKAALVIDVTAKLTAIDNHPMNRVLGFGTKY 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 lsysvfktitdqvlmgvdprgesevkaqgfkaalvidvtakltaidnhpmnrvlgfgtky 300

Qy     301 LKENFSPWIQQHGGWEKILGISHEEVD 327
           |||||||||||||||||||||||||||
Db     301 lkenfspwiqqhggwekilgisheevd 327
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RESULT 2
AAB85166
ID AAB85166 standard; Protein; 327 AA.
XX
AC AAB85166;
XX
DT 07-SEP-2001 (first entry)
XX
DE Human Bcl-G1 polypeptide.
XX
KW Bcl-G; cancer; cancer therapy; oncogene; apoptosis; Bcl-G1; cytostatic;
KW antiapoptotic; chromosome 12p12.3; human.
XX
OS Homo sapiens.
XX
PN WO200144282-A2.
XX
PD 21-JUN-2001.
XX
PF 13-DEC-2000; 2000WO-US33793.
XX
PR 14-DEC-1999; 99US-0461641.
XX
PA (BURN-) BURNHAM INST.
XX
PI Reed JC, Godzik A;
XX
DR WPI; 2001-398125/42.
DR N-PSDB; AAH22582.
XX
PT Novel polynucleotide encoding Bcl-G polypeptide, useful for modulating
PT apoptosis, and for diagnosing and treating cancer -
XX
PS Claim 14; Fig 2; 117pp; English.
XX
CC The invention relates to Bcl-G polypeptides and nucleic acids encoding
CC them. The Bcl-G polypeptides can be expressed by standard recombinant
CC methodology. Bcl-G oligonucleotides (or its anti-sense strand) and Bcl-G
CC specific antibodies are useful for diagnosing cancer, monitoring cancer
CC therapy or assessing prognosis of patients with cancer. The Bcl-G
CC polypeptides are useful for modulating the activity of an oncogenic
CC polypeptide. They are useful for identifying modulators, for modulating
CC a level of apoptosis mediated by the Bcl-G polypeptide. A therapeutic
CC composition comprising the Bcl-G polypeptide, polynucleotide or antibody
CC is useful for treating a pathology characterized by abnormal cell
CC proliferation especially cancer. The present sequence represents a
CC human Bcl-G1 polypeptide.
XX
SQ Sequence 327 AA;

Query Match 100.0%; Score 1709; DB 22; Length 327;
Best Local Similarity 100.0%; Pred. No. 8.1e-166;
Matches 327; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy       1 MCSTSGCDLEEIPLDDDDLNTIEFKILAYYTRHHVFKSTPALFSPKLLRTRSLSQRGLGN 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 mcstsgcdleeipldddd1ntiefkilayytrhhvfkstpalfspkllrtrslsqrglgn 60

Qy      61 CSANESWTEVSWPCRNSQSSEKAINLGKKKSSWKAFFGVVEKEDSQSTPAKVSAQGQRTL 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 csaneswtevswpcrnsqssekainlgkkksswkaffgvvekedsqstpakvsaqgqrtl 120

Qy     121 EYQDSHSQQWSRCLSNVEQCLEHEAVDPKVISIANRVAEIVYSWPPPQATQAGGFKSKEI 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 eyqdshsqqwsrclsnveqcleheavdpkvisianrvaeivyswpppqatqaggfkskei 180

Qy     181 FVTEGLSFQLQGHVPVASSSKKDEEEQILAKIVELLKYSGDQLERKLKKDKALMGHFQDG 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 fvteglsfqlqghvpvassskkdeeeqilakivellkysgdqlerklkkdkalmghfqdg 240

Qy     241 LSYSVFKTITDQVLMGVDPRGESEVKAQGFKAALVIDVTAKLTAIDNHPMNRVLGFGTKY 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 lsysvfktitdqvlmgvdprgesevkaqgfkaalvidvtakltaidnhpmnrvlgfgtky 300

Qy     301 LKENFSPWIQQHGGWEKILGISHEEVD 327
           |||||||||||||||||||||||||||
Db     301 lkenfspwiqqhggwekilgisheevd 327
```

RESULT 3
AAE07041
ID AAE07041 standard; Protein; 252 AA.
XX
AC AAE07041;
XX
DT 23-OCT-2001 (first entry)
XX
DE Human BCL-X-like protein #2.
XX
KW Human; BCL-X-like protein; therapy; physiological disorder.
XX
OS Homo sapiens.
XX
PN WO200157213-A2.
XX
PD 09-AUG-2001.
XX
PF 31-JAN-2001; 2001WO-US03446.
XX
PR 04-FEB-2000; 2000US-0180412.
XX